

Town Hall Meeting

Dec. 9, 2003

SnoKing Tap to Monroe-Echo Lake



SnoKing Tap to Monroe-Echo Lake

PROJECT OVERVIEW

- The SnoKing Tap to Monroe-Echo Lake 500-kV Transmission Line is one of several projects to improve transmission system reliability in northwest Washington, known as the Puget Sound Area Additions.
- The Puget Sound Area Additions include:
 - Kangley-Echo Lake 500-kV Transmission Line Project (will be completed December 2003)
 - Echo Lake Substation Expansion (will be completed December 2003)
 - Substation additions/replacements at Schultz, Raver, Snohomish and Bothell substations



PROJECT NEED

- Maintain reliability in north Puget Sound.
- Increase the interconnections from BPA's 500-kV grid to the local 230-kV and 115-kV grid to deliver power from eastern Washington to local utilities like Seattle City Light, Puget Sound Energy and Snohomish PUD.
- Decrease the risk of mandatory curtailments or blackouts, especially in high-load winter months.
- For the past several years mandatory curtailment plans have been in place for Seattle City Light, Puget Sound Energy and Snohomish PUD. (Invoked summer of 2003)
- A curtailment plan will shut off power to specific customers if the lines delivering power to north Puget Sound exceed safe loading levels.



PROJECT DESCRIPTION

- The decision to construct the 13-mile line was made in the late 1960s with line construction in the early 1970s.
- The line was built at 500-kV in anticipation of population and load growth in the Puget Sound area but operated at 230-kV until Sept. 29, 2003.
- It is BPA's policy to utilize existing lines/corridors before constructing new facilities.
- BPA moved the SnoKing Tap from the 230-kV Monroe to Sammamish Line to the 500-kV Monroe-Echo Lake Line.
- The line design meets Washington State noise regulations.



TRANSMISSION LINE LANDOWNER CONCERNS

- Starting on Sept. 29, BPA received many phone calls and emails from area residents about the line noise.
- While some increase in the noise level was expected, the level of landowner concern was not.
- Noise levels will be higher on 500-kV lines than 230-kV lines.
- Noise levels will likely be higher in wet, foggy weather than dry weather.
- Landowners have also expressed concerns about property values and electric magnetic fields.
- Some landowners have experienced nuisance shocks.



SNOKING SUBSTATION LANDOWNER CONCERNS

- BPA received several phone calls about the substation noise from residents within the vicinity of the SnoKing Substation located in Bothell, Wash.
- BPA has preformed very preliminary measurements near the substation.
 - Noise levels range from 45 dBA - 57 dBA
- These preliminary noise measurements warrant further investigation.
- Additional SnoKing Substation measurements have been scheduled and the results will be released as soon as possible.



BPA's PLAN

- Complete thorough inspections to identify potential hardware problems.
 - Inspections should be complete by the end of December
 - BPA will share inspection results with area residents
- Determine what can be done, if anything, to reduce noise levels.
 - Lab tests
 - BPA will share the progress of the tests and research by the end of December
- In the interim, BPA will address concerns and answer questions thru our toll-free line.



CONDUCTOR INSPECTIONS

- BPA began line inspections from the ground immediately to see if equipment was functioning properly: insulators and conductor/wire.
- BPA maintenance crews climbed towers from Oct. 8-10 to closely inspect equipment.
- No obvious problems were found that would contribute to noise.
- BPA helicopters started flying the line on Oct. 17 as part of the ongoing inspection efforts with emphasis on the transmission line conductors/wires.



CONDUCTOR NOISE MEASUREMENTS

- Wet weather noise measurements were taken at 16 locations on Oct. 2. Noise levels ranged from 44-48 dBA.
- Dry weather noise measurements were taken at five locations on Oct. 10. Noise levels ranged from 40-45 dBA.
- Noise level measurements are within Washington state and Snohomish County standards.
- BPA is still investigating the dry weather levels, because they were higher than expected, as was the corona activity on the conductor/wires.
- Potential sources of dry weather noise
 - Damaged or worn insulators
 - Damaged or worn spacers-damper
 - Dirty conductor
 - Damaged conductor
 - More inspections are necessary



CONDUCTOR NOISE MEASUREMENTS

- Wet weather noise measurements were taken at 16 locations on Oct. 2. Noise levels ranged from 44-48 dBA.
- Dry weather noise measurements were taken at five locations on Oct. 10. Noise levels ranged from 40-45 dBA.
- Noise level measurements are within Washington state and Snohomish County standards.
- BPA is still investigating the dry weather levels, because they were higher than expected, as was the corona activity on the conductor/wires.
- Potential sources of dry weather noise
 - Damaged or worn insulators
 - Damaged or worn spacers-damper
 - Dirty conductor
 - Damaged conductor
 - More inspections are necessary



CONDUCTOR CLEANING

- On Dec. 6, BPA spent seven hours cleaning a short span of the line where corona levels.
 - Measurements of ambient noise conditions along the line and at the SnoKing Substation were taken.
 - Transmission line jumpers in that line section were replaced.
- BPA is analyzing measurements taken before, during and after the cleaning to determine its effectiveness.
- BPA will evaluate all of the inspection information and determine the appropriate next steps.
- BPA has scheduled a public meeting. The meeting is on:

Tuesday, Jan. 27, 2004

7 p.m. to 9 p.m.

Skyview Middle School

21404 35th Ave SE

Bothell, WA 98021



SnoKing Tap to Monroe-Echo Lake

NEXT STEPS

- BPA will continue to inform the public on any new developments.
- BPA can assist citizens to reduce nuisance shocks through grounding. If you have experienced nuisance shocks, please report those incidents to BPA.
- If you have questions, please call BPA toll free at 1-888-276-7790. Project information is also available on line at:
http://www2.transmission.bpa.gov/PlanProj/Transmission_Projects/

